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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,991	02/13/2002	Lloyd Watts	ANSCP006	6884

22830 7590 06/26/2006

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EXAMINER

SELLERS, DANIEL R

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/074,991

Applicant(s)

WATTS, LLOYD

Examiner

Daniel R. Sellers

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6, 7, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6, 7, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 6, 7, 20, and 21** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim limitations do not produce a useful, concrete, and tangible result.

Regarding **claims 6 and 7**, the claims recite a process, or "a method of analyzing an input signal into a plurality of frequency components", wherein on page 1, lines 17-19, a frequency component is defined as different channels. The process of analyzing the signal results in two different channels, and on page 1, lines 11-12, the applicant describes the claimed features as a useful step in analyzing a signal, such that the signal is separated into frequency components, or different channels. However the steps of analyzing an input as claimed only performs a step of analyzing the signal, and the useful result of analyzing the signal is not obtained. The claimed subject matter does not provide a concrete result of analysis, nor does it provide a tangible result of analysis.

In essence, a mathematical algorithm is claimed that outputs two different channels given an input signal, wherein there is no claimed application of these output signals. The output is merely a collection of data, or signal, and signals are non-statutory matter.

Regarding **claim 20 and 21**, the claims recite systems for performing the methods of claims 6 and 7 respectively. The same argument applies, and there is not a useful, concrete, and tangible result gained from operation of the systems. The systems do not provide analysis of the input signal, but merely perform a step in analyzing the signal. The output of the system is non-statutory matter, because signals are non-statutory matter.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 6, 7, 20, and 21** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Carlson et al., USPN 4,674,125.

Carlson teaches a method of separating audio and video signals into their respective frequency components, into different channels containing different bands of frequencies the original input signal (Col. 6, lines 16-29).

Specifically regarding **claim 6**, Carlson teaches:

processing the signal with a first low pass filter to produce a first low pass filtered signal (Fig. 1, unit 100-1, Fig. 1b, unit 100<sub>b-k</sub>, 102, signals  $G_{k-1}$ , and  $G_k$ );

subtracting the first low pass filtered signal from the input signal to derive a first frequency component (Fig. 1b, 110,  $G_k$ ,  $G_{k-1}$ , and  $L_{k-1}$ );

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processing the signal with a second low pass filter to produce a second low pass filtered signal (Fig. 1, unit 100-2, Fig. 1b, unit 100<sub>b-k</sub>, and signal G<sub>k</sub>); and

subtracting the second low pass filtered signal from the first low pass filtered signal to derive a second frequency component (Fig. 1b, unit 110, 100<sub>b-k</sub>, 102, signals G<sub>k-1</sub>, G<sub>k</sub>, L<sub>k-1</sub>, and Fig. 1, signal L<sub>1</sub>).

Specifically regarding **claim 7**, Carlson teaches the features of claim 6, and the noted difference, wherein:

... processing the low pass filtered signal with a second low pass filter to produce a second low pass filtered signal (Fig. 1, unit 100-2, signal G<sub>1</sub>, Fig. 1b, unit 100<sub>b-k</sub>, and signal G<sub>k</sub>); and ....

The teachings of Carlson teach that the second low pass filter is connected to the output of the first low pass filter, and therefore the separation of an input signal into two different frequency components is accomplished.

Specifically regarding **claim 20**, see the preceding argument with respect to claim 6. Carlson teaches a system for separating the input signals into a plurality of frequency components, wherein the first and second low pass filters are comprised of digital convolution filters and the first and second processors are digital subtractors (Fig. 1, 1b, Col. 6, lines 38-40, and Col. 13, line 54 - Col. 14, line 35).

Specifically regarding **claim 21**, see the preceding argument with respect to claim 7 and claim 20. Carlson teaches a system with these features.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Engel, USPN 3,976,863, teaches a filter bank for decomposing signals into different frequency channels (Col. 5, lines 3-28);

Nakatani et al., USPN 5,150,413, teaches a cascaded group of filters an a subtraction process to form bandpass filters (Fig. 5); and

Lovett, USPN 6,434,417 B1 teaches creating bandpass filters using low pass filters and subtraction (Col. 7, lines 4-10).

5. Technology Center 2600 has undergone restructuring as of March 19, 2006. Any **further communication** regarding this application should **indicate the new Art Unit 2615** (old art unit 2644).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 571-272-7528. The examiner can normally be reached on Monday to Friday, 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRS



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**